



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/712,008	11/14/2003	Juergen Halm	245129US41CONT	7875
22850	7590	07/08/2004	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			ZANELLI, MICHAEL J	
		ART UNIT		PAPER NUMBER
		3661		

DATE MAILED: 07/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/712,008	HALM ET AL.	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 14 November 2003.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-21 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 14 November 2003 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. 10/282,329.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This application is a Continuation of S.N. 10/282,329, filed 10/28/02. Claims 1-21 are pending.

2. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. 10/282,329, filed on 10/18/02.

3. Claim 21 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A. As per claim 21, "said ... evaluating" lacks antecedence. Note the evaluating step was introduced in claim 19.

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 1-15 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-15 of copending Application No. 10/282,329. Although the conflicting claims are not identical, they are not

patentably distinct from each other because the only difference is that claims 1-15 of the instant application are written in "means for" format whereas claims 1-15 of the '329 application use the term "unit".

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1-6, 11 and 14-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Crowne et al. (5,723,870).

A. As per claims 1 and 16, Crowne discloses a system for interrogating sensors onboard aircraft as essentially shown in Figs. 1A and 2. An onboard sensor (12) monitors an aircraft parameter and provides signals (42) related thereto. A means (54) transmits the monitored parameter and a means (44) receives interrogation signals. A processing means (34) includes means (56) for transmitting an interrogation signal and a means (58) for receiving the monitored aircraft parameter. A means (38) is provided to display the information. The above means perform the functions as set forth above.

- B. As per claims 2 and 17, as above wherein the monitored parameter is preliminarily processed (i.e., encoder 32) prior to transmission.
- C. As per claims 3 and 18, as above wherein the means positioned on the aircraft includes its own power source (46).
- D. As per claims 4-6 and 15, as above wherein the onboard means and the processing means are separate units as shown in Fig. 2 and may be linked by wireless means, including infrared (col. 6, lines 7-21).
- E. As per claims 11 and 14, as above wherein the means for processing may be a handheld device used to sense the content of a fuel tank (col. 5, lines 2-7, 22-24).
8. Claims 1-5, 7, 10, 11 and 15-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Belk et al. (5,969,260).
- A. As per claims 1 and 16, Belk discloses a system for interrogating sensors onboard aircraft as essentially shown in Fig. 2. An onboard sensor (18) monitors an aircraft parameter and provides signals related thereto. A means (20) transmits the monitored parameter and receives interrogation signals. A processing means (22) includes means for transmitting an interrogation signal and for receiving the monitored aircraft parameter (col. 6, lines 33-51). The processing means may include a display (col. 7, lines 52-56). Fig. 3 sets forth the functions performed by the above system.
- B. As per claims 2 and 17, as above wherein the monitored parameter is preliminarily processed prior to transmission (col. 6, lines 19-32).
- C. As per claims 3 and 18, as above wherein the means positioned on the aircraft includes its own power source (col. 2, lines 53-58; col. 2, lines 64-66).

D. As per claims 4, 5 and 15, as above wherein the monitoring means and processing means are separate units and may be linked through wireless communication means (Fig. 2; col. 2, lines 29-51).

E. As per claims 7, 10, 11, 19 and 20, as above wherein the processing means may be a handheld unit used by an inspector to interrogate onboard sensors and display information and/or store the information for later processing and analysis (col. 2, lines 29-51; col. 6, lines 17-19; col. 7, lines 50-60).

9. Claims 1, 7-11, 16 and 18-21 are rejected under 35 U.S.C. 102(e) as being anticipated by Henry et al. (2003/0187554).

A. As per claims 1 and 16, Henry discloses a system and method for diagnosing aircraft components (Abs.). As shown in Fig. 6, various aircraft components are monitored and the information stored on memory chips associated with the monitored component [0024-0025]. The information may be transmitted over wireless link to an external computer to enable a maintenance technician to evaluate the data [0034]. As shown in Fig. 6, hand-held computers with displays may be used.

B. As per claims 7, 9 and 19, the presence or absence of faults in aircraft components may be determined from the collected data as well as comparing the data to stored performance data to identify trends [0030].

C. As per claims 8, 20 and 21, as noted above a memory chip may be associated with each component to be monitored [0025] and the data transmitted to a ground unit for analysis (Fig. 3).

D. As per claims 10 and 11, as noted above hand-held computers with displays may be used.

E. As per claim 18, as noted above the information may be transmitted over wireless link to an external computer to enable a maintenance technician to evaluate the data [0034].

10. Claims 1-5, 7-11 and 16-21 are rejected under 35 U.S.C. 102(e) as being anticipated by Haugse et al. (2003/0191564).

A. As per claims 1 and 16, Haugse discloses a system and method for diagnosing aircraft components. As shown in Fig. 1, various aircraft components are monitored by sensors (21,22) and the information stored in a data acquisition unit (26). The information may be transmitted over wireless link to an external computer (30) to enable a maintenance technician to evaluate the data [0013]. As noted in [0014], a conventional laptop or personal computer may function as the external computer system (30). The external computer system is programmed to perform various operations on the collected data.

B. As per claims 2 and 17, as above wherein preprocessing may be performed on the data prior to transmission to the external computer [0016].

C. As per claim 3, as above wherein the data acquisition means operates on an independent power supply [0017].

D. As per claims 4 and 5, the data acquisition unit (onboard sensor unit) is separate from the external computer and communicates over a wireless link [0013].

E. As per claims 7, 9 and 19, the presence or absence of faults in aircraft components may be determined from the collected data as well as comparing the data to stored performance data [0014].

F. As per claims 8, 20 and 21, as noted above wherein the data acquisition unit includes a memory which stores the sensor data prior to transmission to the external computer [0016].

G. As per claims 10 and 11, as noted above hand-held computers with displays may be used [0016].

H. As per claim 18, as noted above the information may be transmitted over wireless link to an external computer to enable a maintenance technician to evaluate the data [0013], [0016].

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a

later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

13. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Haugse et al. in view of Johnson et al. (5,359,446).

A. As per claim 6, Haugse discloses using a wireless link to transmit information from the data acquisition unit to the external computer. The claimed invention differs in that infrared transmitters/receivers are used as the means of providing the wireless communication link.

B. At the time of applicant's invention it was known in the art to use infrared transmitters/receivers to wirelessly communicate information from onboard aircraft devices to ground-based computer systems. For example, Johnson discloses a wireless communication system which uses infrared to communicate information between an aircraft and a ground computer (see Abs.; Fig. 3). One of ordinary skill in the art would have found it obvious to utilize an infrared link as the wireless communication link of Haugse because such links were commonly used for this purpose in the aircraft art as exemplified by Johnson.

14. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Haugse et al. in view of Ellinger et al. (5,880,480).

A. As per claim 14, Haugse discloses using various sensors to provide an indication of the health of the aircraft. In particular, sensors can be provided to sense the pooling of water in areas which may cause problems in the aircraft [0015]. The claimed invention specifically provides for sensing water in the fuel tanks. However, it was

well-known in the art that water in an aircraft's fuel tank could produce adverse affects (see as exemplary Ellinger at col. 1, line 63 to col. 2, line 2). One of ordinary skill in the art would have found it obvious to include a sensor in the fuel tank to detect water content because it was well-known that water accumulation in the fuel tank was undesirable.

15. Claims 12 and 13 are distinguishable over the prior art. The prior art of record does not show or reasonably suggest, in combination with the other claimed subject matter, including at least one sensor to measure wear and tear of a wing flap actuator (claim 12) or a sensor positioned in a bottom area of a hydraulic container for sensing a quality of the hydraulic fluid (claim 13).

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The cited references are of general interest.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Zanelli whose telephone number is (703) 305-9756. The examiner can normally be reached on Monday-Thursday 5:30 AM - 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas G. Black can be reached on (703) 305-8233. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/mjz


MICHAEL J. ZANELLI
PRIMARY EXAMINER